

**REMARKS**

Claims 1-22 and 24-30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Akatsu in view of Jung et al. '735 ("Jung"). Applicants respectfully traverse this rejection for at least the following reasons.

In order to expedite prosecution, Applicants' representative initiated a telephone interview with Examiner Kang. Applicants and Applicants' representative would like to thank Examiner Kang for his courtesy in conducting the interview and for his assistance in resolving issues. A summary of the interview discussion follows.

During the interview, the Examiner referenced Akatsu, suggesting that the disclosure therein appeared to teach communication between internal components (e.g., computer 524 and TV adapter 604 shown in Figure 6 thereof). In view of Jung's alleged disclosure of two physical layers, the Examiner alleged that it would have been obvious to provide the intercommunication of Akatsu between interfaces having different physical layers. However, for reasons already of record, it is respectfully submitted that Akatsu does not disclose intercommunication between computer 524 and TV adapter 604 shown in Figure 6 (indeed, in order to do so, Akatsu would need to disclose and enable the needed protocol to provide such interconnection and communication between the differently configured components, which Akatsu fails to do). Moreover, the teachings of Jung would not lead to intercommunication among interfaces having different physical layers.

Turning first to Akatsu, there is no disclosure or suggestion related to, let alone enablement of, communication between computer 524 and TV adapter 604. Akatsu merely discloses that "the 1394 I/F 684 supports an IP over 1394 link 612 and an MPEG over 1394 link 616, between a personal computer 524 and a TV adapter 604" (col. 7, line 65 – col. 8,

line 2). Accordingly, Akatsu discloses only that the internal components (i.e., computer 524 and TV adapter 604) are *each* coupled to the 1394 I/F through the respective links 612 for the computer and 616 for the TV. Akatsu is completely silent as to a separate interface having a different physical layer for interconnecting the computer and TV for communication therebetween, let alone enable the needed protocol for providing such an interconnection. Indeed, as evidenced by Figure 6 of Akatsu, the computer 524 and TV adapter 604 are connected only to the 1394 I/F independently, and Akatsu does not provide any description nor enablement for an interconnection or intercommunication between the TV and computer.

Independent claims 1 and 12 each embody a first internal interface unit including a first type of physical layer and a second internal interface unit including a second type of physical layer, *which is different from said first type of physical layer* (included in the first internal interface unit), for connecting to the internal network and a controller which transmits and receives information *between* said first and second internal interface units having the different types of physical layers.

In contrast, as expressly disclosed by Akatsu and admitted by the Examiner, the single internal interface 684 uses the same 1394 protocol for its respective connections to the internal network (Figure 6). The Examiner therefore relies on Jung as allegedly disclosing two internal interface units having different physical layers and attempts to modify Akatsu thereby to reach the claimed invention. However, it is respectfully submitted that even assuming *arguendo* proper, the proposed combination does not disclose or suggest the claimed combination.

Specifically, the alleged internal interface units 20 and 70,72 of Jung are not controlled so that information can be received and transmitted *therebetween*. Jung does not disclose or suggest communication between two interfaces having different physical layers. In direct contrast, the internal network of Jung is expressly described as a plain old telephone service (POTS) whereby communication between the respective interfaces 12a,12b runs through a single physical layer (i.e. telephone wiring 14; col. 3, lines 50-55).

Indeed, Jung is expressly directed to “computers to be linked together using conventional twisted pair telephone lines instead of established local area network media such as 10 BASE-T [because] such an arrangement, referred to herein as a home network environment, provides the advantage that existing telephone wiring in a home may be used to implement a home network environment” (col. 1, lines 35-41). However, due to issues related to telephone wiring (noise, etc.), Jung goes on to reference implementation of a network in a home network environment, and the problems associated therewith which Jung attempts to obviate (*see* col. 1, line 63 – col. 2, line 23). Accordingly, Jung is directed to a home network environment implemented with different network protocols (10, 100 BASE-T disclosed) in which a reconfiguring between the different network protocols can be automated. Namely, Jung discloses a mechanism by which to enable an automated selection of *one* of the network protocols based on which one is active, so that the user does not need to manually configure the network drivers (*see* col. 2, lines 39-44).

Jung is completely silent as to enabling communication between two interfaces having different physical layers, and in fact teaches away from such a configuration based on the aforementioned desire to implement the add-on network onto an existing POTS telephone wiring 14 through which wiring 14 communication between the internal

interfaces occurs. Accordingly, if Akatsu was modified to include the alleged internal interfaces 20 and 70,72, the proposed combination would result in a structure in which the single 1394 interface (element 684 shown in Figure 6 of Akatsu) is replaced with two interfaces 12a, 12b of Jung which communicate therebetween using the same physical layer (telephone wiring 14), with the differing network protocols being configured automatically at the alleged interfaces 20 and 70,72. As noted above, however, only one of the protocols is selected at any given time based on which one is detected to be active, so that intercommunication between differing protocols would be impossible. Again, Jung actually teaches away from intercommunication between the differing protocols in view of the “advantage that [an] existing telephone wiring in a home may be used to implement a home network environment” (col. 1, lines 35-41). Accordingly, even assuming *proper*, the proposed combination does not disclose or suggest, *inter alia*, a first internal interface unit including a first type of physical layer and a second internal interface unit including a second type of physical layer, *which is different from said first type of physical layer* (included in the first internal interface unit), for connecting to the internal network and a controller which transmits and receives information *between* said first and second internal interface units having the different types of physical layers.

Indeed, it is respectfully submitted that only Applicants conceived the idea for having multiple interface units having different physical layers for an *internal* network whereby, for example, different protocols can be configured to communicate with one another (e.g., microwave <--> TV, etc.). On the other hand, the cited prior art has not considered any such cross-communication, and for at least this reason, the cited prior art has

had no disclosed need or desire for multiple interface units having different physical layers for the *internal* network.

The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard for establishing obviousness under § 103:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejection does not "establish *prima facie* obviousness of [the] claimed invention" as recited in claims 1 and 12 because the proposed combination fails the "all the claim limitations" standard required under § 103.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 12 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 103 be withdrawn.

**CONCLUSION**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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